IMPROVED INFRASTUCTURE FOR CDMS AND JPL MOLECULAR SPECTROSCOPY CATALOGUES

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Over the past years a new infrastructure for atomic and molecular databases has been developed within the framework of the Virtual Atomic and Molecular Data Centre (VAMDC). Standards for the representation of atomic and molecular data as well as a set of protocols have been established which allow now to retrieve data from various databases through one portal and to combine the data easily. Apart from spectroscopic databases such as the Cologne Database for Molecular Spectroscopy (CDMS), the Jet Propulsion Laboratory microwave, millimeter and submillimeter spectral line catalogue (JPL) and the HITRAN database, various databases on molecular collisions (BASECOL, KIDA) and reactions (UMIST) are connected. Together with other groups within the VAMDC consortium we are working on common user tools to simplify the access for new customers and to tailor data requests for users with specified needs. This comprises in particular tools to support the analysis of complex observational data obtained with the ALMA telescope.

In this presentation requests to CDMS and JPL will be used to explain the basic concepts and the tools which are provided by VAMDC. In addition a new portal to CDMS will be presented which has a number of new features, in particular meaningful quantum numbers, references linked to data points, access to state energies and improved documentation. Fit files are accessible for download and queries to other databases are possible.